CAUSE OF ACTION NO. 4,165-B

STATE OF TEXAS	)	IN THE DISTRICT COURT
	)	
v.	)	181ST JUDICIAL DISTRICT
	)	
ERNEST LOPEZ	)	POTTER COUNTY, TEXAS

AFFIDAVIT OF DR. RICHARD SODERSTROM

Before me, the undersigned authority, personally appeared Richard Soderstrom, who, after being duly sworn, stated the following:

1. I am a medical doctor specializing in gynecology and reproductive health. From 1963 to 1985, I was a gynecology consultant at Children's Orthopedic Hospital. I am Clinical Professor Emeritus at the University of Washington School of Medicine. I have written and published over a hundred articles in the fields of gynecology and reproductive health. A copy of my curriculum vitae is attached.

2. My published articles include *Colposcopic Documentation, An Objective Approach to Assessing Sexual Abuse of Girls*, The Journal of Reproductive Medicine, Vol. 39, No. 1 (1994) (discussed below).

Ramos case

3. In 1997, I was asked to review the medical evidence in *Ex Parte Jesse Ramos*, a case based in Amarillo, Texas. In that case, a nurse practitioner diagnosed sexual abuse based on minor genital findings. For reasons set forth in my affidavit in *Ramos*, these findings were inconclusive and carried no medical weight in determining whether the child had been molested. In my affidavit, I also made clear that photographs were required in order to properly diagnose sexual abuse and review findings. In 2000, I was prepared to testify in an evidentiary hearing in *Ramos* (and had plane reservations to do so) when Ms. Kirkwood, Mr. Ramos' attorney, told me that the conviction had been overturned through an agreement with the District Attorney. Because it appeared that there had been a serious miscarriage of justice in *Ramos*, I did not charge for my services.

Lopez Evaluation

4. In 2005, Ms. Kirkwood asked me to review the evidence in a sexual assault case

involving an infant. Since the Amarillo hospital had begun taking photographs of sexual assault examinations (possibly as a result of my affidavit), I agreed to review the photographs. In reviewing the photographs, I relied on current medical standards, the medical literature and the medical precepts widely used by experts in this field.

5. Based on this review, my conclusion was that these photographs are inconsistent with sexual abuse. The only abnormality in the photographs is a small amount of blood on the posterior fourchette, a finding that may also be found in unabused children. The absence of any signs of injury on the inner thighs, outer genitalia and hymen indicates that the bleeding was not caused by abuse. Some of the bleeding shown in the photographs may also have been caused or aggravated by a clotting disorder, which is documented in the child's lab reports.

6. To explain my conclusions, I will first summarize the history of the medical evaluation of child sexual abuse. I will then discuss my specific observations on the sexual assault photographs taken in this case. Finally, I will make some suggestions on the medical issues that should be addressed in determining the cause of death, as well as the genital bleeding.

Medical Evaluation of Child Sexual Abuse

7. In the early 1980s, physicians were asked to conduct medical examinations to determine whether children had been sexually abused. Since such examinations do not occur in the normal course of medical care for pre-adolescents, there was little research or information on which to base such examinations or to determine whether the medical evidence supported an allegation of abuse.

8. National Child Sexual Abuse Summit Meeting. In October 1985, a National Child Sexual Abuse Summit Meeting was convened in an effort to clarify appropriate standards for courtroom testimony. For cases involving vaginal penetration, the participants concluded that one must find either clear-cut hymenal damage or injuries in the posterior fourchette consisting of severe lacerations, bruises or healing abraded areas. These conclusions were reported by Ann Tipton in *Child Sexual Abuse: Physical Examination Techniques and Interpretation of Findings*, Adolescent and Pediatric Gynecology 2:10-25 (1989). The Summit further emphasized the need for photographic documentation of normal, as well as abnormal, findings in pediatric genital examinations. At that time, no one had yet conducted the research necessary to determine the types of pediatric genital

findings that might fall within the "normal" range.

9. Subsequent research. After the Summit, several physician groups began to examine normal children to determine a base line for findings of sexual assault. They found, unexpectedly, that many of the findings previously believed to confirm abuse were also found in unabused children. To understand the present state of knowledge, it is helpful to understand the *Emans* study; the *McCann* studies; the Muram classification system; the Color Atlas of Child Sexual Abuse; and the development of differential (or alternative) diagnoses of pediatric gynecological findings previously thought to confirm abuse.

10. *Emans* study. In 1987, Dr. Emans and her colleagues reported comparative genital findings on abused and unabused children. Emans, Woods, Flagg & Freeman, *Genital Findings in Sexually Abused, Symptomatic and Asymptomatic Girls*, Pediatrics Vol. 79, No. 5 (May 1987) (the "Emans study"). In this study, the researchers examined three groups of girls: Group 1, girls who were believed to be sexually abused; Group 2, normal girls with no genital complaints; and Group 3, girls with other genital complaints (*e.g.*, vaginal rashes). The researchers found that there was significant overlap in the genital findings of all three groups, and that the genital findings in groups 2 and 3 were virtually identical. This suggested that many of the findings previously believed to confirm abuse could also be caused by irritation or inflammation, possibly aggravated by scratching (or, in the case of infants, cleaning).

11. *McCann* studies. In 1988-90, Dr. McCann and his colleagues reported their findings on the genital and anal examinations of children selected for nonabuse. In the first study, the researchers found that soft tissue changes in the anal area that had been viewed as evidence of abuse were also found in unabused children, and emphasized the need for caution in rendering an opinion on the significance of such findings. McCann, Voris, Simon and Wells, *Perianal Findings in Prepubertal children Selected for Nonabuse: A Descriptive Study*, Child Abuse & Neglect 13, 179-193 (1989).

12. In a second study, Dr. McCann and his colleagues reported that many of the genital findings previously viewed as evidence of abuse were also found in unabused children. Such findings included erythema (redness); hymenal mounds, projections and notches; and friability (tendency to bleed) in the posterior fourchette, with active bleeding sometimes caused by traction. The researchers noted that it was increasingly evident that there would always be an overlap in

findings between nonabused and abused children, and that the determination of sexual abuse could therefore rarely rest on a physical examination alone. McCann et al, *Genital Findings in Prepubertal Girls Selected for Nonabuse: A Descriptive Study*, Pediatrics, Vol. 86, No. 3 (Sept. 1990).

13. Classification systems. To reflect advances in medical research, Dr. Muram developed a four-part classification system which, with some modifications, is still used today:

1. Normal appearing genitalia
2. Nonspecific findings – Abnormalities of the genitalia that could have been caused by sexual abuse but also are often seen in girls who are not victims of sexual abuse (e.g., inflammation and scratching). These findings may be the sequelae of poor hygiene or nonspecific infection. Included in this category are redness of the external genitalia, increased vascular pattern of the vestibular and labial mucosa, presence of purulent discharge from the vagina, small skin fissures or lacerations in the area of the posterior fourchette, and agglutination of the labia minora.
3. Specific findings – The presence of one or more abnormalities strongly suggesting sexual abuse. Such findings include recent or healed lacerations of the hymen and vaginal mucosa, an enlarged hymenal opening of more than 1 cm,[1] proctoepisiotomy (a laceration of the vaginal mucosa extending through the recto-vaginal septum to involve the rectal mucosa), and indentations in the skin indicating teeth (bite) marks. This category also includes patients with a laboratory confirmation of a venereal disease.
4. Definitive findings – any presence of sperm.

Muram, D., *Child sexual abuse—genital tract findings in prepubertal girls*, American Journal of Obstetrics and Gynecology, 160 328-333 (1989).

14. *Color Atlas of Child Sexual Abuse*. In 1989, Dr. Chadwick and his colleagues developed the *Color Atlas of Child Sexual Abuse*, a medical reference tool that contained more than 100 pictures of the vaginal areas of abused and nonabused children. This atlas was designed to help practitioners distinguish between abuse, congenital features, accident, and infection.

15. *Colposcopic documentation*. In 1994, I wrote an article on the colposcopic documentation of sexual abuse. Colposcopic photographs have been used since

[1] This is no longer recognized as an abnormality or sign of abuse.

the mid-1980s to assess the findings in child sexual abuse cases. Such photographs should have a record of the magnification as well as a method of measurement. Colposcopic photographs allow a comparison of any findings with those in the *Color Atlas* and further allow independent review of any conclusions.

16. *Differential diagnoses*. As a result of advances in the medical literature, standard medical textbooks and research articles list numerous differential diagnoses for conditions that were previously viewed as evidence of abuse. Such differential diagnoses include congenital features; infection or other medical conditions (including diaper rash or contact dermatitis); and accidental injury unrelated to sexual abuse. *See, e.g.*, Carpenter & Rock, *Pediatric and Adolescent Gynecology* (2d ed., 2000) (differential diagnoses include diaper rash and other types of inflammation, sometimes resulting from poor hygiene); *Anogenital Injuries in Child Pedestrians Run Over by Low-Speed Motor Vehicles: Four Cases with Findings that Mimic Child Sexual Abuse*, Boos, Rosas, Boyle & McCann, Pediatrics, Vol. 112 No. 1 pp. e77-84 (July 2003).

17. As this history suggests, diagnosing sexual abuse from genital findings is fraught with difficulties and requires a thorough evaluation of other possibilities, ranging from ordinary childhood conditions, such as diaper rash and contact dermatitis, to car accidents and other forms of accidental trauma.

Sexual Assault Examination Photographs

18. When Ms. Kirkwood asked me to review the material in the *Lopez* case, I asked to conduct an initial review of the photographs without any additional information about the case. The photographs that I reviewed were marked Exs. 30-44 and 46-49. Ex. 1 was identified as "Vas, Isis." The photographs were untimed and did not have a measuring tool to indicate scale.

19. Photographs 31-32. These photographs show no injuries to the inner thighs or outer genital area. One would expect to find such injuries in an examination that occurred within a few hours of an assault, particularly in a child victim. These photographs show brownish staining of the area just inside the labia majora. I could not determine the cause of the staining from these photographs. Possibilities include feces, diaper rash, dried blood, or possibly some combination of the three.

20. Photograph 33. This area shows the staining more clearly, but its cause is

indeterminate. In this photograph, it appears that there is a small amount of blood in the area of the posterior fourchette. It is not possible to determine the cause of the bleeding or whether this blood is originating in the urinary tract or genitalia.

21. Photographs 34-35. These photographs show no injuries to the external genitalia, including the labia majora. The hymen is intact, with no tears or lacerations. In these photographs, there is a small clot or pool of blood on the posterior fourchette. Using my own hand as a rough guide to size, it appears that this blood is approximately the size of a split pea. It is not possible to deter...ine the cause or origin of the blood from these photographs.

22. Photographs 36-42. In photograph 36, there appears to be blood on the q-tip, suggesting that the use of the q-tip is stirring up the blood in the posterior fourchette. Subsequent photographs show increased bleeding, with the q-tip seemingly stirring up the area further. Photographs 37 and 38 show that the tissue is being stretched more than in earlier photographs. The redness of the tissue in this area is appropriate coloration and does not suggest assault. There do not appear to be hematomas or other signs of abuse.

23. It is hard to imagine a type of sexual assault that would cause the type of bleeding portrayed in these photographs without injuring the outer genitalia or hymen. If enough pressure were exerted to cause a tear below the hymen, one would also expect a hymenal laceration, not present here. Given the small distance between the labia majora and the hymen in an infant, the insertion of even a small adult finger would almost certainly cause a hymenal tear or laceration whle the exertion of force would likely cause injury to the labia majora and/or inner thighs.

24. In the photographs, it is not possible to determine the initial source of the bleeding. However, depending upon the skill of the practitioners and the medical condition of the child, the attempted insertion of a foley as well as the sexual assault examination itself may cause or aggravate bleeding in the area of the posterior fourchette.

25. Photographs 43-48. These photographs show the anal area. There is no sign of force in these photographs, as one would expect if the sexual assault examination were conducted within a few hours of the assault. Instead, this area has some redness and what appear to be small blood clots. It is not possible to determine the cause of the redness, which is common in children, or the blood clots. Some possibilities include diarrhea and/or diaper rash, possibly aggravated by wiping

stool from this area.

26. In conclusion, the only significant finding in the photographs is a small amount of blood on the posterior fourchette. Sexual assault is unlikely given the lack of injury to the thighs, labia majora or hymen. Put in perspective, the insertion of an adult finger (let alone a penis) would likely dilate and split the hymenal ring, while the use of force would almost certainly cause injury to the inner thighs or labia majora.

27. Based on the photographs, the blood on the posterior fourchette may have been caused by some type of inflammation, infection or cleaning, possibly aggravated by the sexual assault examination. I would not rule out the possibility that the initial bleeding was from some other source, such as the urinary tract, or the result of an earlier injury or medical condition.

Medical testimony

28. After reviewing the photographs, I reviewed the testimony of the trial witnesses, including three nurses and a physician. Much of this testimony was inconsistent with the medical research or literature. In general, it appeared that the trial witnesses were not familiar with the research on child sexual abuse and infant genitalia, the range of genital and anal findings in normal children, the differential diagnoses for various genital and anal findings, or the classification systems commonly used in evaluating child sexual abuse. The medical personnel also appeared to ignore key medical information, including the lab reports and the child's symptoms in the days preceding admission (discussed below).

Lab reports and symptoms

29. Since the photographs did not suggest abuse, I asked whether there was any objective medical data on the child's health prior to the time of the examination. At that time, Ms. Kirkwood did not have pediatric or hospital records. However, she had some lab reports.

30. The lab reports showed many abnormalities. To me, the most striking were found in the child's coagulation studies, which were based on a blood draw taken at 12:30 p.m. I understand that this was about the time of the sexual assault examination. The lab reports show a prothrombin time of 20.4 (normal reference range of 10.6 to 12.6). The PTT activated was over 212 seconds (normal reference range of 27-39.7 seconds). These figures indicate that the child had a

bleeding disorder at the time of the sexual assault examination. Since the child's clotting system was not working, any trauma would have appeared more severe than would otherwise be the case. Other lab results suggested that the child was ill prior to admission.

31. Given the lab results, I asked whether the child had any symptoms prior to the alleged assault and whether there was evidence of bleeding in other parts of the child's body. I was told that the child had reportedly been ill for several days, possibly due to spider bites, and that her symptoms included black stool (often a sign of bleeding from the upper intestinal tract), fever, failure to eat and general lethargy. I understand that, in addition to the black stool, there was possible bleeding in the urinary tract the night prior to admission (resulting in blood spots on the diaper), bleeding from the mouth during CPR (reported in a 911 call), retinal hemorrhage (noted on admission to the hospital), and some bleeding in the brain (noted at autopsy).

32. From a medical perspective, all of these symptoms must be viewed in conjunction with the lab results to determine the cause of bleeding and death. Based on the lab results and history, I urge that the complete medical records in this case be made available to reviewing physicians, including a pediatric hematologist and forensic pathologist. Without such records, it would not be possible to reach an accurate diagnosis.

Conclusion

33. In my professional opinion, the sexual assault photographs do not suggest sexual abuse. The source of the original blood clot cannot be determined from the photographs, and the absence of injury to the inner thighs, labia majora and hymen are inconsistent with abuse.

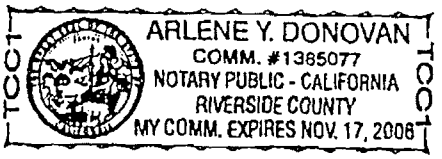
34. In looking for a cause of bleeding (genital or otherwise) and cause of death, it will be critical to evaluate the child's lab reports as well as the clinical signs of illness in the days preceding her death. Any such evaluation should bear in mind that the child had a documented bleeding disorder shortly after hospital admission.

I declare under penalty of perjury under the laws of the States of Washington and Texas that the foregoing is true and correct.

Richard M. Soderstrom, M.D.

Richard M. Soderstrom, M.D.

Subscribed and sworn to before me
this 15 day of FEBRUARY 2006



Arlene Y. Donovan

Notary Public
State of California